REMARKS

Amendments to the Claims:

Each of claims 1, 7, 14, 19 and 23 has been amended to improve clarity of language as is explained further herein below. Specifically, the breadth and/or scope of the claims have not been changed by way of amendment. Specific amendments to the claims are shown in the claim listing contained hereinabove. The amendments to the claims are supported at least by Figs. 1 and 2, as well as the specification at page 5, line 19 through page 9, line 2.

No new matter has been added by way of amendments to the claims. There are no other amendments to the specification or to the drawings.

Examiner's Response to Applicants' Arguments:

Beginning at page 2 of the final action dated September 18, 2007 the Examiner makes specific responses to the Applicants' previous arguments. The Applicants address the Examiner's responses as follows:

In paragraph 4 of the final action, the Examiner responds to the Applicants' argument that Tresser does not disclose employing a mathematical process that involves the entire data set, but instead discloses that the data set is cut into a plurality of pieces and then either compressed or signed.

The Examiner argues that Tresser, at col. 9, lines 8-19, discloses that the data stream is "optionally" cut into pieces, and therefore, because the cutting is optional, it can be concluded that Tresser inherently discloses employing a mathematical process that involves the entire data set.

The Applicants respond by pointing out exactly what Tresser states. Tresser states, "[a]t **340**, matrix M is interpreted as a data stream, and optionally (selectively) cut into a plurality of pieces (some of which overlap)." (Tresser, col. 9, lines 8-9.)

The Applicants contend that what Tresser is saying is that the manner in which the data stream is cut is optional or selective. In other words, there is no question that the data stream *is* cut, but the manner in which the cutting is performed and/or the places at which the data stream is cut is selective or optional. That is, the Applicants contend that the Examiner has misinterpreted what Tresser discloses.

In paragraph 5 of the final action, the Examiner responds to the Applicants' argument that Tresser does not disclose a halftone image that is produced directly

from the original image. Specifically, the Examiner argues that the Applicants' do not specifically claim that the halftone image is produced *directly* from the original image without any intervening transformations. The Examiner argues that Tresser discloses producing, ultimately, the halftone image from the original image and, therefore, Tresser anticipates this limitation of the Applicants' claims.

The Applicants respond by noting that the claims have been amended as shown herein above in an attempt to clarify that the halftone image is generated directly from the initial digital file without any intervening transformations. Accordingly, the Applicants contend that in view of such clarifying amendments, the Examiner's argument regarding this matter is now moot.

At paragraph 7 of the final action, the Examiner reiterates the Examiner's previous contention that Tresser discloses performing a mathematical process on the first plurality of discrete digital values to generate a sender authentication key and performing the mathematical process on the second plurality of discrete digital values to generate a receiver authentication key. The Applicants note that the Examiner, in paragraph 24 of the final action, contends that Tresser discloses the aforementioned limitations at various cited places.

In response the Applicants again assert that Tresser never mentions, even in those placed cited by the Examiner, anything remotely similar to a first plurality of discrete digital values *and* a second plurality of discrete digital values, nor does Tresser ever mention anything remotely similar to a sender authentication key *and* a receiver authentication key. The Applicants can find no explanation by the Examiner in regard to what specific terminology of Tresser the Examiner is equating with the Applicants' terms (i.e., first plurality of discrete digital values, second plurality of discrete digital values, sender authentication key and receiver authentication key).

Rejection of Claims Under 35 U.S.C. 102:

Each of claims 1-11, and 14-18 has been rejected under 35 U.S.C. 102(e) as being anticipated by Tresser. As mentioned above, each of claims 1, 7 and 14 has been amended in an attempt to improve clarity. Specifically:

Claims 1 and 7 each now read, in part, as follows:

submitting the initial digital file directly to a predetermined halftoning process to generate a digital halftone file without any intervening transformations

Claim 14 now reads, in part, as follows:

submit the initial digital file directly to a predetermined halftoning process to generate a digital halftone file without any intervening transformations

By contrast, Tresser teaches that the image (I) undergoes a particular process before the halftoning process. Specifically, Tresser teaches that a new image (I') is computed out of the image (I) by covering the image (I) with a grid of size H-by-V, and then averaging the grey levels on the little rectangles defined by the grid. (Tresser, col. 7, lines 7-9.) Then, a halftoned version (M) of the new image (I') is computed using some preferred halftoning engine. (Tresser, col. 7, lines 12-15.) Thus, according to the teachings of Tresser, a grey level averaging process is performed on the image before the halftoning process is performed.

Also, according to Tresser, once the halftoned version (M) of the image is produced, it is cut into a plurality of pieces, wherein some of the pieces may be processed in an image compression engine, while others of the pieces may be processed by a digital signature scheme, such as the RSA scheme. (Tresser, col. 9, lines 8-19.) Then, the information coming from part of the halftoned version (M) can be signed in a signature to be placed in the same part or a subset of that part. (Tresser, col. 9, lines 26-32.) That is, Tresser teaches that the image data is split up into various pieces, and each piece is subjected to a different process such as compression or the digital signature scheme.

Thus, the Applicants' claims require generating a halftone version of an image directly from the initial digital file, while Tresser teaches that a new image is first computed out of the initial digital file by covering the original image with a grid of size H-by-V, and then averaging the grey levels on the little rectangles defined by the grid, after which the halftone image is produced, as is discussed above.

In view of the above examination and comparison of what is claimed and of what is taught or suggested by the reference, it is evident that the reference does not show something that is literally *identical* in each and every way to what is claimed, as is required for anticipation. Rather, on the contrary, it is evident that the reference shows something that is substantially different from what is claimed.

Therefore, for at least the reasons set forth above, the Applicants submit that Tresser does not anticipate claims 1, 7 and 14.

Inasmuch as claims 2-6 depend from claim 1, and claims 8-11 depend from claim 7, and claims 15-18 depend from claim 14, it is axiomatic that claims 2-6, 8-11 and 15-18 are also not anticipated by Tresser for at least the reasons that claims 1, 7 and 14 are not anticipated by Tresser, as explained above.

Accordingly, the Applicants respectfully request that the rejections of each of claims 1-11 and 14-18 be withdrawn and that those claims be allowed.

Rejection of Claims Under 35 U.S.C. 103:

Each of claims 12 and 13 has been rejected under 35 U.S.C. 103(a) as being unpatentable over Tresser in view of Linsker. Each of claims 19, 22 and 23 has been rejected under 35 U.S.C. 103(a) as being unpatentable over Tresser in view of Brundage. Each of claims 20, 21, 24 and 25 has been rejected under 35 U.S.C. 103(a) as being unpatentable over Tresser in view of Brundage and further in view of Linsker.

According to the USPTO, obviousness requires, among other things, that the prior art references, when combined, must teach or suggest *all* the claim limitations. (MPEP 2142.)

In rejecting claim 19, the Examiner contends that Tresser discloses all of the claim limitations except for displaying a copy of the authentication key to a user via one of a printer or a user display. The Examiner also contends that this limitation that is not disclosed by Tresser is disclosed by Brundage.

The Applicants note that claim 19 now reads, in part, as follows:

submit the initial digital file directly to a predetermined halftoning process to the initial digital file to generate a digital halftone file without any intervening transformations

As argued herein above with respect to claims 1, 7 and 14, Tresser does not teach or suggest this claim limitation. Likewise, none of the other references teach or suggest this reference. Therefore, claim 19 is not obvious over Tresser in view of Brundage at least for the reason that those references do not teach or suggest all the limitations of claim 19. Accordingly, the Applicants respectfully request that the rejection of claim 19 be withdrawn, and that claim 19 be allowed.

The Applicants note that claim 23 now reads, at least in part, as follows:

a sender computer configured to provide the electronic document file in the form of a sender initial digital file;

a sender printer configured to:

receive the sender initial digital file;

submit the sender initial digital file directly to a predetermined halftoning process to generate a first digital halftone file without any intervening transformations;

submit the first digital halftone file to a predetermined mathematical process to thereby generate a sender authentication key; and

display the sender authentication key to a sender;

a receiver computer configured to receive the electronic document file from the sender as a receiver initial digital file;

a receiver printer configured to:

receive the receiver initial digital file;

submit the receiver initial digital file directly to the predetermined halftoning process to generate a second digital halftone file without any intervening transformations;

submit the second digital halftone file to the predetermined mathematical process to thereby generate a receiver authentication key; and

display the receiver authentication key to a receiver.

The Examiner contends that all of the limitations of claim 23 are disclosed by Tresser, except for displaying a copy of the authentication key, which the Examiner contends is disclosed by Brundage.

As is discussed herein above, after a thorough search of Tresser, the Applicants find no teaching or suggestion of both a sender computer *and* a receiver computer configured *as claimed*, nor do the Applicants find any teaching or suggestion of both a sender printer and a receiver printer configured *as claimed*. Rather, Tresser discloses, at most, a single computer and a single printer. (Tresser, col. 8, lines 36-40, Fig. 3, col. 10, lines 31-35, Fig. 6, col. 10, lines 48-67, Fig. 7.)

A thorough search of Tresser also fails to reveal any teaching or suggestion of any means to: *submit the first digital halftone file to a predetermined mathematical process to thereby generate a sender authentication key;* **and** *submit the second digital halftone file to the predetermined mathematical process to thereby generate a receiver authentication key*, as is required by claim 23.

The Applicants have meticulously studied the portions of Tresser cited by the Examiner and do not find any teaching or suggestion of the claim limitations, as explained above.

Moreover, Tresser does not teach or suggest the following limitations, as is explained above with respect to claims 14 and 19:

> *submit the sender initial digital file directly to a predetermined halftoning process to generate a first digital halftone file without any intervening transformations*

> *submit the receiver initial digital file directly to the predetermined halftoning process to generate a second digital halftone file without any intervening transformations*

For at least the reasons set forth above, claim 23 is not obvious over Tresser in view of Brundage. Accordingly, the Applicants respectfully request that the rejection of claim 23 be withdrawn, and that claim 23 be allowed.

It is axiomatic that if an independent claim can be shown to be allowable over a reference under 35 USC 102, then each and every claim which depends therefrom should also be allowable under 35 USC 102. (That is, if an independent claim includes a limitation which differentiates such claim from a cited reference under 35 USC 102, than any claim which depends from this independent claim also *inherently*

includes the same limitation, and is therefore patentable over the cited reference for at least the same reason as the independent claim is patentable over the reference.) Furthermore, it is axiomatic that if an independent claim is allowable under 35 USC § 102, then there is no possible way that any respective dependent claim can be obvious under 35 USC § 103.

Inasmuch as claims 12 and 13 depend from independent claim 7, it follows that claims 12 and 13 are not obvious for at least the reasons set forth above with respect to the arguments against the rejection of claim 7. Accordingly, the Applicants respectfully request that the rejections of claims 12 and 13 be withdrawn and that those claims be allowed.

Similarly, inasmuch as claims 20, 21 and 22 depend from independent claim 19, it follows that claims 20, 21 and 22 are not obvious for at least the reasons set forth above with respect to the arguments against the rejection of claim 19. Accordingly, the Applicants respectfully request that the rejections of claims 20, 21 and 22 be withdrawn and that those claims be allowed.

Likewise, inasmuch as claims 24 and 25 depend from claim 23, it follows that claims 24 and 25 are not obvious for at least the reasons set forth above with respect to the arguments against the rejection of independent claim 23. Accordingly, the Applicants respectfully request that the rejections of claims 24 and 25 be withdrawn and that those claims be allowed.

SUMMARY

The Applicants believe this communication constitutes a full and complete response to the final action dated September 18, 2007, in accordance with all applicable requirements. The Applicants therefore respectfully request timely allowance of claims 1-25.

Respectfully submitted,
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Date: November 07, 2007 by _____

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